18. STUDIES ON PLANT-PARASITIC NEMATODES OF KERALA. III. AN ADDITIONAL LIST OF PLANTS ATTACKED BY ROOT-KNOT NEMATODE, *MELOIDOGYNE* SP. (TYLENCHOIDEA : HETERODERIDAE)

Root-knot nematodes belonging to the genus *Meloidogyne* Goeldi, 1892, are of considerable agricultural importance. Following Thorne (1961), Nadakal (1963, 1964) and Nadakal & Ninan Thomas (1964) have called attention to the fact that there is an increasing need for the study of the distribution of *Meloidogyne* spp. in India with respect to their host plants. Although Rangaswami *et al.* (1960, 1961) and Nirula & Kumar (1963), among others, have contributed to our knowledge of the host plants of root-knot nematodes, a great deal of information still remains to be made available. This is the third report in the series of a survey of plants parasitized by these nematodes. Plants were collected from cultivated lands in the vicinity of Mar Ivanios College, Trivandrum, during the period extending from September to December 1963. Only one species *M. incognita* (Kofoid & White 1919) was encountered and the infection was found restricted to the root-systems. The results of the present study are summarized in the following table.

TABLE

HOST PLANTS OF *Meloidogyne incognita* IN KERALA

Host plant	*Egg out-put*	*Male*	*Nature of attack*
Achyranthes aspera L.	Egg-mass not observed	..	Very mild infection and galling
Allmania nodiflora Wight	Low	..	Heavy infection and galling
Alternanthera sessilis Forsk.	Medium	Present	Heavy infection and galling ; females invade stele
Amaranthus viridis L.	Medium	..	Mild infection and galling
Andrographis echioides Nees	High	..	Heavy infection and galling
Aneilema nudiflorum R. Br.	Medium	..	do.
Borreria ocymoides DC.	Low	..	Mild infection and galling on rootlets
Canna indica L.	Medium	..	do.
Carica papaya L.	Low	..	Mild infection and galling
Cardiospermum halicacabum L.	Medium	..	Heavy infection and galling
Celosia cristata L.	do.	..	do.
Clitoria ternatea L.	do.	..	Mild infection and galling
Coleus malabaricus Benth.	do.	Present	Heavy infection and galling
Commelina benghalensis L.	One adult ♀ recovered	..	..

Cucumis sativus L.	Medium	..	Mild infection and galling
Curculigo orchioides Gaertn.	Egg-mass not observed	..	do.
Desmodium gyrans Wight	A few larvae recovered	..	..
Emilia sonchifolia DC.	Egg-mass not observed	..	Mild infection and galling
Euphorbia pulcherrima Willd.	Low	..	do.
Heliconia metallica L.	Medium	..	Heavy infection and galling on rootlets
Hedyotis corymbosa Willd.	High	Present	Very heavy infection and galling
Jussiaea suffruticosa L.	Egg-mass not observed	..	Mild infection and galling
Leucas aspera Spreng.	High	Present	Heavy infection and diffused galling
Merremia tridentata Roth	Medium	..	Mild infection and no galling
Mollugo disticha Seringe.	Egg-mass not observed	..	Mild infection and galling
Phaseolus mungo L. var. *radiatus*	Medium	..	do.
Physalis minima L.	do.	..	do.
Piper nigrum L.	High	..	Heavy infection and diffused galling
Portulaca oleracea L.	Egg-mass not observed	..	Mild infection and galling on rootlets
Solanum indicum L.	Low	..	Mild infection and galling
Spermacoce stricta L.	High	..	Heavy infection and galling
Stachytarpheta indica Vahl	Medium	..	Mild infection and galling
Struchium sparganophorum	do.	..	do.

The table serves to indicate the differential susceptibility of host plants, the rarity of males among these nematodes, and the variations in their egg out-put. *Hedyotis corymbosa*, *Leucas aspera*, *Piper nigrum*, and *Spermacoce stricta* are some of the most susceptible plants observed. By contrast *Desmodium gyrans* and *Achyranthes aspera* appear to be somewhat resistant. The weeds such as *Leucas*, *Spermacoce*, and *Allmania* may serve as potential 'reservoir hosts', as they grow wild on almost all cultivable lands. As Thorne (1961) has pointed out, the value of crop-rotation, which is a time-honoured method of controlling root-knot, cyst-forming, and other destructive nematodes, may be largely nullified unless the weed hosts are eliminated. Therefore, a knowledge of the weeds potentially susceptible to these nematodes would be very useful in agricultural practice. The damage that may be caused by root-knot nematodes to the economically important plant, *Piper nigrum*, remains to be assessed. To the present author's knowledge most of the plants listed have not been recorded before as hosts of *Meloidogyne* spp.

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19. *MIMOSA INVISA* MART. : A NEW RECORD FOR INDIA

(*With a plate*)

During a visit to Perunna, Changanacherry, Kerala State, in December 1963, the author collected a plant of the genus *Mimosa* which could not be compared with any of the species described in Indian floras. On investigation it turned out to be *Mimosa invisa* Mart., which has been confirmed by Dr. S. K. Mukerjee, Keeper, Central National Herbarium, Calcutta.

The taxon is a native of Tropical America. It appears that no collection of the species has so far been made from India. In Perunna it grows luxuriantly over large areas, being common on field borders and waste places, trailing or rambling over bushes. Sometimes it was observed to climb over large shrubs and small trees.

While it is possible that the plant may have been introduced there in the past, there is no evidence to confirm this from local